CLAIMS

What is claimed is:

1. A therapeutic composition comprising a polypeptide comprising a therapeutically active portion of lysyl oxidase pro-peptide, said polypeptide being in a pharmaceutically acceptable carrier substance therefore, wherein said polypeptide does not have lysyl oxidase enzymatic activity.

2. The therapeutic composition of claim 1, wherein said polypeptide is active in inhibiting cell growth in soft agar.

3. The therapeutic composition of claim 1, wherein said polypeptide is active in inhibiting tumor formation.

4. The therapeutic composition of claim 1, comprising a polypeptide comprising an active portion of the amino acid sequence given in SEQ ID NO.: 1 or SEQ ID NO.: 2, or conservative substitions thereof.

5. The therapeutic composition of claim 1, comprising a polypeptide comprising an active portion of an amino acid sequence selected from the group consisting of SEQ ID NOs.: 3-8, or conservative substitions thereof.

6. A method of identifying the active portion of lysyl oxidase pro-peptide, said method comprising the steps of:

a) providing cells transformed with an oncogene, wherein growth of said transformed cells is known to be inhibited by lysyl oxidase pro-peptide;

b) culturing said cells in the presence of a fragment of lysyl oxidase pro-peptide of length l_1, wherein said l_1 fragment

is known to comprise said active portion of lysyl oxidase pro-peptide;

c) determining a value for the effectiveness of said l_1 fragment in inhibiting growth of said transformed cells in soft agar;

d) culturing another aliquot of said cells with a smaller portion of said lysyl oxidase pro-peptide, of length l_2;

e) determining a value for the effectiveness of said l_2 fragment in inhibiting growth of said transformed cells in soft agar; and

f) repeating steps d) and e) with progressively smaller portions of said lysyl oxidase pro-peptide, of length l_i, until the minimum sized active portion is determined.

7. The method of claim 6, wherein said transformed cells are cultured in soft agar.

8. A method of treating a patient, said method comprising the steps of:

providing a patient suffering from cancer; and

administering to said patient a therapeutically effective amount of the composition of claim 1.

9. The method of claim 8, wherein said patient suffers from a form of cancer dependent on *ras* signaling for cell transformation.

10. A method of treating a patient, said method comprising the steps of:

providing a patient suffering from a disease or disorder that occurs via elevated *ras*-dependent signaling; and

administering to said patient a therapeutically effective amount of the composition of claim 1.

11. The method of claim 9, wherein said patient suffers from colon, breast, lung or prostate cancer.

12. The method of claim 10, wherein said disease or disorder is selected from the group consisting of diseases or disorders of the kidney, cardiovascular system and immune system.

13. The method of claim 10, wherein said patient suffers from a bone disease.

14. The method of claim 13, wherein said bone disease is an osteopenic condition.

15. The method of claim 14, wherein said bone disease is osteoporosis.